

Amended Specification

(Amended) In some instances the first phase 18 with recovered organic acid can be integrated into another industrial process. For example a separated first phase 18 with recovered lactic acid that resulted from an azeotropic distillation with diethylbenzene as the azeotroping agent provides a feed for other processing steps as described in the co-filed application, "Azeotrope Distillation of Cyclic Esters of Hydroxy Organic Acids", serial number 09/809,534. Thus, in certain embodiments, the separated and removed first phase may not need to be stripped of residual azeotroping agent or of certain other compounds, if they either do not interfere with downstream processing or actually provide a benefit to subsequent processes.

Amended Claims

1. (Amended) A process for obtaining an organic acid from a feed stream comprising at least one of an organic acid ammonium salt, an organic acid amide, or an alkylamine-organic acid complex, comprising the steps of:

mixing a feed stream and at least one azeotroping agent, wherein the feed stream comprises at least one of an organic acid ammonium salt, an organic acid amide, or an alkylamine-organic acid complex, and wherein the organic acid of the salt, amide or complex is selected from the group consisting of monocarboxylic acids, dicarboxylic acids, and tricarboxylic acids having from 2 to 8 carbon atoms;

heating at least one of the feed stream, the azeotroping agent, or the mixture thereof thereby (a) decomposing the ammonium salt, the amide, or the alkylamine-organic acid complex to produce organic acid and (b) producing a first vapor stream that comprises at least one first azeotrope comprising the organic acid and the azeotroping agent; and

separating the first vapor stream from the mixture.

10. (Amended) The process of claim 1, further comprising producing a first bottoms stream as the first vapor stream is separated, wherein the first bottoms stream comprises at least one of an organic acid ammonium salt, an organic acid amide, or an alkylamine-organic acid complex.

20. (Amended)The process of claim 1, wherein the feed stream comprises an organic acid amide selected from the group consisting of lactamide, pyruvamide, beta-hydroxybutyramide, propionamide, and acetamide.

32. (Amended)The process of claim 1, wherein the azeotroping agent is a hydrocarbon having a boiling point of between about 100 °C less than and 150 °C more than the organic acid boiling point.

41. (Amended)The process of claim 1, wherein the process is a continuous process.